AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Complete Listing of Claims:

Claim 1 (amended): An antimicrobial composition, comprising:

pyrithione or a pyrithione complex; and

a zinc or copper or silver source selected from the group consisting of zinc or copper or silver salts, zinc or copper or silver oxides, zinc or copper or silver hydroxides, zinc or copper or silver metals, ~~zinc or copper or silver complexes,~~ and combinations thereof;

wherein the weight ratio of said zinc or copper or silver source to said pyrithione or said pyrithione complex is in the range from ~~about~~ 1:100 to 1:10 ~~about 1:1~~, and wherein said antimicrobial composition has an enhanced biocidal effect against microorganisms selected from the group consisting of free-living microorganisms, parasitic microorganisms, adherent microorganisms, biofilms, and combinations thereof, said antimicrobial compositions being free of thiazolinone and free of a strong chelating agent.

Claim 2 (original): The antimicrobial composition of claim 1, wherein said pyrithione complex is selected from the group consisting of pyrithione salts and pyrithione adducts.

Claim 3 (original): The antimicrobial composition of claim 2, wherein said pyrithione salt is selected from the group consisting of sodium pyrithione, potassium pyrithione, lithium pyrithione, ammonium pyrithione, zinc pyrithione, copper pyrithione, calcium pyrithione, magnesium pyrithione, strontium pyrithione, silver pyrithione, gold pyrithione, manganese pyrithione, ethanolamine pyrithione salt, chitosan pyrithione salt, disulfide pyrithione salt, and combinations thereof.

Claim 4 (withdrawn)

Claim 5 (original): The antimicrobial composition of claim 1, wherein said zinc salt is selected from the group consisting of zinc acetate, zinc oxide, zinc carbonate, zinc chloride, zinc sulfate, zinc hydroxide, zinc citrate, zinc fluoride, zinc iodide, zinc

lactate, zinc oleate, zinc oxalate, zinc phosphate, zinc propionate, zinc salicylate, zinc selenate, zinc silicate, zinc stearate, zinc sulfide, zinc tannate, zinc tartrate, zinc valerate, zinc gluconate, zinc undecylate, and combinations thereof.

Claim 6 (withdrawn)

Claim 7 (withdrawn)

Claim 8 (original): The antimicrobial composition of claim 1, wherein said zinc or copper or silver complex comprises zinc or copper or silver in combination with a complexing agent.

Claim 9 (previously amended): The antimicrobial composition of claim 8, wherein said complexing agent is selected from the group consisting of zeolites, titania, carbon, azoles, ethylenediaminetetraacetic acid, ethylene-bis-(oxyethylenenitrilo)-tetra-acetic acid, crown ethers, cryptates, cyclodextrin, and combinations thereof.

Claim 10 (original): The antimicrobial composition of claim 1, wherein said zinc or copper or silver source is generated electrolytically.

Claim 11 (previously amended): The antimicrobial composition of claim 1, wherein said weight ratio of said zinc or copper or silver source to said pyrithione or said pyrithione complex is in the range of from about 1:100 to about 1:10.

Claims 12-32 (withdrawn)

Claim 33 (amended): An antimicrobial composition <u>concentrate useful upon dilution</u> for treating microorganisms selected from the group consisting of free-living microorganisms, parasitic microorganisms, adherent microorganisms, biofilms, and combinations thereof, comprising:

a salt of pyrithione; and

a water soluble zinc metal salt;

wherein the weight ratio of said water-soluble zinc metal salt to said salt of pyrithione is in the range from ~~about~~ 1:100 to ~~about 1:1~~ <u>1:10</u> and wherein said antimicrobial composition has an enhanced biocidal effect against microorganisms selected from the group consisting of free-living microorganisms, parasitic microorganisms, adherent microorganisms, biofilms, and combinations thereof.

upon dilution in a working fluid at a dilution ratio of the concentrate to the working fluid of between about 1:10 and about 1:100.

Claim 34 (amended): The antimicrobial composition concentrate of claim 33, wherein said salt of

pyrithione is sodium pyrithione and said zinc metal salt is selected from the group consisting of zinc chloride, zinc oxide, zinc sulfate, and combinations thereof.

Claims 35-42 (withdrawn)

Claim 43 (amended): An antimicrobial composition concentrate, comprising:

pyrithione or a pyrithione complex; and

zinc from a zinc source selected from the group consisting of zinc salts, zinc oxides, zinc hydroxides, and combinations thereof;

wherein the weight ratio of said zinc source to said pyrithione or said pyrithione complex is in the range from 50:1 to 1:50, and wherein said antimicrobial composition has an enhanced biocidal effect against microorganisms selected from the group consisting of bacteria, fungi, and combinations thereof, upon dilution of the concentrate in a working fluid at a dilution rate of between about 1:10 and about 1:100.

Claim 44 (amended): An antimicrobial composition, comprising:

pyrithione or a pyrithione complex; and

~~a zinc or copper or~~ silver source selected from the group consisting of ~~zinc or copper or~~ silver salts, ~~zinc or copper or~~ silver oxides, ~~zinc or copper or~~ silver hydroxides, ~~zinc or copper or~~ silver metals, ~~zinc or copper or~~ silver complexes, and combinations thereof;

wherein the weight ratio of said ~~zinc or copper or~~ silver source to said pyrithione or said pyrithione complex is in the range from about 1:100 to about 1:10, and wherein said antimicrobial composition has an enhanced biocidal effect against microorganisms selected from the group consisting of free-living microorganisms, parasitic microorganisms, adherent microorganisms, biofilms, and combinations thereof.

Claim 45 (previously added): An antimicrobial composition, comprising:

pyrithione or a pyrithione complex; and

a zinc source selected from the group consisting of zinc salts, zinc oxides, zinc hydroxides, and combinations thereof;

wherein the weight ratio of said zinc source to said pyrithione or said pyrithione complex is present in a ratio from 1:100 to ~~1:1~~ 1:10, said antimicrobial compositions being free of thiazolinone and free of a strong chelating agent.

Claim 46 (previously added): The antimicrobial composition of claim 45 wherein said weight ratio is from 1:100 to 1:10.

Claim 47 (previously added): The antimicrobial composition of claim 1 which additionally comprises water or an organic solvent.

Claim 48 (previously added): The antimicrobial composition of claim 47 wherein said organic solvent is an alkanolamine.

Claim 49 (previously added): The antimicrobial composition of claim 33 which additionally comprises water or an organic solvent.

Claim 50 (previously added): The antimicrobial composition of claim 49 wherein said organic solvent is an alkanolamine.

Claim 51 (previously added): The antimicrobial composition of claim 43 which additionally comprises water or an organic solvent.

Claim 52 (previously added): The antimicrobial composition of claim 51 wherein said organic solvent is an alkanolamine.

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Claim 53 (amended): The antimicrobial composition concentrate of claim 44 which additionally comprises water or an organic solvent.

Claim 54 (previously added): The antimicrobial composition of claim 53 wherein said organic solvent is an alkanolamine.

Claim 55 (previously added): The antimicrobial composition of claim 45 which additionally comprises water or an organic solvent.

Claim 56 (previously added): The antimicrobial composition of claim 55 wherein said organic solvent is an alkanolamine.

Claim 57 (previously added): The antimicrobial composition of claim 1 wherein said zinc or copper or silver salts is selected from the group consisting of zinc or copper or silver sulfates, zinc or copper or silver chlorides, and combinations thereof.

Claim 58 (previously added): The antimicrobial composition of claim 44 wherein said zinc or copper or silver salts is selected from the group consisting of zinc or copper or silver sulfates, zinc or copper or silver chlorides, and combinations thereof.